WHAT IS CLAIMED IS:

1. An ink-jet recording apparatus comprising:

an ink-jet head that has an ink ejection surface on which a plurality of nozzles are arrayed;

a medium carrier that forms a carrying surface on which a record medium is carried;

a carriage mounted with the ink-jet head such that the ink ejection surface confronts the carrying surface;

a carriage drive mechanism that includes a plurality of parallel guide rods supporting the carriage and extending across the direction where the record medium is carried by the medium carrier, the carriage drive mechanism reciprocating the carriage along the guide rods; and

a guide shift mechanism that shifts the plurality of guide rods in a direction where the gap between the ink ejection surface and the carrying surface varies.

2. The ink-jet recording apparatus according to claim 1, wherein the guide shift mechanism comprises rotatable rotators that support the guide rods at eccentric positions, each of the rotators that has a center of rotation at a position different from the eccentric positions, and wherein the rotation of the rotators causes the guide rods to shift.

3. The ink-jet recording apparatus according to claim 2, wherein the guide shift mechanism further comprises a torquer that imparts a torque to the rotators.

4. The ink-jet recording apparatus according to claim 3, wherein the torquer imparts a torque to each of the rotators associated with the plurality of guide rods.

5. The ink-jet recording apparatus according to claim 3, wherein the torquer is a slidable bar.

6. The ink-jet recording apparatus according to claim 5, wherein the rotators are gears, and the bar has a rack engaging with each of the gears.

7. The ink-jet recording apparatus according to claim 6, wherein the torquer is provided with a knob.

8. The ink-jet recording apparatus according to claim 2, wherein each guide rod is supported by a couple of the rotators.

9. The ink-jet recording apparatus according to claim 1, wherein the carriage drive mechanism includes:

pairs of pulleys each having a rotational axis orthogonal to the guide rods, a couple of pulleys making up each pair being

separated from each other along the guide rods; and

a plurality of carriage drive belts each wrapped around the pair of pulleys.

10. An ink-jet recording apparatus comprising:

an ink-jet head that has an ink ejection surface on which a plurality of nozzles are arrayed;

a medium carrier that forms a carrying surface on which a record medium is carried;

a carriage that holds the ink-jet head such that the ink ejection surface confronts the carrying surface;

a guide shift mechanism that includes a pair of parallel guide rods that support the carriage, gears that support one end of the guide rods at eccentric positions, eccentric cams that is disposed at the other end of the guide rods and that have the same dimeters as those of the gears, and racks that engage respectively with a pair of the gears that support the one end of the pair of guide rods, the racks slidable in a direction where the gears rotate, wherein

sliding of the racks causes rotation of the gears so that the pair of guide rods is shifted to thereby adjust the gap between the ink ejection surface and the carrying surface.